

AUTHOR INDEX

- Alpern, R.J., 393
 Anderson, S., 441
 Andoh, T.F., 34
- Baum, M., 423
 Becker, B.N., 176
 Bennett, P.H., 124
 Bennett, W.M., 1, 34
 Berns, J.S., 15, 54
 Bomzon, A., 549
 Border, W.A., 455
 Breyer, J.A., 114
 Burdmann, E.A., 34
- Cheung, A.K., 196
 Coffman, T.M., 404
 Cohen, R.M., 15
- Depner, T.A., 285
- Epstein, M., 503, 563, 576
- First, M.R., 373
 Fogo, A., 396
 Ford, P.A., 54
 Friedlander, M.A., 331
- Gentilini, P., 530
 Gibney, R., 218
 Glasscock, R.J., 387
- Goldfarb, S., 15
 Gomez, R.A., 492
 Goral, S., 364
- Hakim, R.M., 149, 246, 253
 Helderman, J.H., 364
 Henrich, W.L., 257
 Henriksen, J.H., 505
 Hilgers, K.F., 492
 Holt, S., 549
 Hostetter, T.H., 93, 431
 Hricik, D.E., 331
 Hull, A.R., 160
 Humes, H.D., 381
- Ibrahim, H.N., 431
 Ichikawa, I., 396
 Imig, J.D., 412
 Ismail, N., 149, 253, 270
- Kaplan, A.A., 576
 Kapoian, T., 239
 Kennefick, T.M., 441
- Laffi, G., 530
 La Villa, G., 530
 Levy, M., 520
 Lewis, E.J., 77
 Leyboldt, J.K., 196
- McCusker, F.X., 226
 Marra, F., 530
 Matsusaka, T., 396
 Meyer, T.W., 124
 Molitch, M.E., 101
 Moller, S., 505
 Moore, K., 549
 Morris, P.J., 188
 Murthy, B.V.R., 346
 Myers, B.D., 124
- Navar, L.G., 412
 Nelson, R.G., 124
 Noble, N.A., 455
 Norwood, V.F., 492
- O'Bryan, G.T., 93
- Paganini, E.P., 306
 Parker, T.F., III, 149, 253
 Pereira, J.G., 346
 Pinzani, M., 530
- Quan, A., 423
- Rodby, R.A., 132
 Rosenberg, M.E., 431
 Rudnick, M.R., 15
 Rutherford, W.E., 218
- Schoenfeld, P.Y., 321
 Schreiner, G.E., 152
 Sharma, K., 80
 Sherman, R.A., 239
 Steinman, T.I., 298
 Stone, W.J., 176
 Swan, S.K., 27
- Teehan, B.P., 226
 Textor, S.C., 67
 Thornton, T.A., 246
- Van Stone, J.C., 214
 Venkatesan, J., 257
- Wang, C.T., 412
 Weber, K.T., 467
 Wedeen, R.P., 46
 Wolf, G., 448
 Woods, J.D., 381
- Yagi, N., 306
 Young, E.W., 170
- Zager, R.A., 3
 Ziyadeh, F.N., 80, 448
 Zou, L., 412

SUBJECT INDEX

- AA (arachidonic acid) derivatives, *see* Leukotrienes; Prostaglandins; Thromboxane(s); Thromboxane A₂
- Absolute fibrosis, described, 468
- ACE, *see* Angiotensin-converting enzyme
- Acidosis, *see* Metabolic acidosis in ESRD
- Active proteins, HD membrane transport of oncologically, 200
- Acute bile duct ligation (BDL) models of biliary obstruction effects on renal function, 552
- Acute lead nephropathy, 46
- Acute renal failure (ARF)
- HD membrane effects on outcome of, 207
 - see also* Acute renal failure, CRRT of; Acute renal failure, nephrotoxic
- Acute renal failure (ARF), CRRT of, 306-320
- advantages and disadvantages of, 313-315
 - applications of, 311-312
 - components of, 307-309
 - and CRRT for conditions other than ARF, 312-313
 - CRRT defined, 307
 - dialysis dose with, 309-310
 - future role of, 316-317
 - outcome of, 315-316
- Acute renal failure (ARF), nephrotoxic, 3-14
- cellular energetics alterations and, 4-5
 - contrast-media, *see* Contrast media-associated nephropathy
 - determinants of nephrotoxin uptake in, 3-4
 - homeostasis disturbances and, *see* Homeostasis disturbances in nephrotoxic ARF
 - oxidative stress and, 5-7
 - pathways potentially contributing to, 10-12
- Adenosine, role of, in HRS, 570-571
- Adequacy of dialysis
- of CAPD dose for ESRD, 228-232
 - see also* Kt/V
- Adsorption, protein, by HD membranes, 200-202
- Advanced glycation end-products (AGEs)
- and hyperglycemia in diabetic nephropathy development, 83-85
 - in pathogenesis of comorbid conditions with ESRD secondary to DM, 340-342
- Advantages and disadvantages
- of CRRT in ARF, 313-315
 - of rHuEPO for predialysis anemia in CRF, 273-274
- Adverse effects of metabolic acidosis in predialysis CRF patients, 278
- AGE(s), *see* Advanced glycation end-products
- Age
- donor, renal graft survival according to, 374
 - as risk factor for NIDDM nephropathy, 135
- Aging, *see entries beginning with term:* Older
- Albumin excretion
- in IDDM nephropathy, 101, 102, 104-109
 - in NIDDM nephropathy, renal morphology according to, 129
 - see also* Proteinuria

- Aldose reductase inhibitors in IDDM nephropathy management, 118-119
- Aldosterone, role of, in progression of renal disease, 435-437; *see also* Renin-angiotensin-aldosterone system, role of, in renal disease progression
- Alkali therapy of metabolic acidosis in predialysis CRF patients, 280
- Allergic reactions, *see* Anaphylactoid reactions to HD membranes
- Alpha (α) blockers, 262, 263
- Amadori glycation end-products, and hyperglycemia in diabetic nephropathy development, 85
- Ambulatory peritoneal dialysis, *see* Continuous ambulatory peritoneal dialysis for ESRD
- Aminoglycoside nephrotoxicity, 27-33
described, 28-29
effects of once-daily dosing on, 29-30
experimental nephroprotection against, 29
pharmacology and renal handling of aminoglycosides and, 27-28
- Amputation, peripheral vascular disease and, in patients with ESRD secondary to DM, 339
- β_2 (β_2)m Amyloidosis due to HD membranes, 206
- Anaphylactoid reactions to HD membranes, 205-206
to reused dialyzers, 324-325
- Anemia in ESRD
myocardial dysfunction and, 257-260, 264
see also Anemia in predialysis CRF patients; Recombinant human erythropoietin for anemia of ESRD
- Anemia in predialysis CRF patients, 270-274
correction of, *see* Recombinant human erythropoietin for predialysis anemia in CRF
historical perspective on, 270
mechanisms and characteristics of, 271
- Angiotensin II (ANG II)
introduction to, 393-395
see also Angiotensin II receptors; Angiotensinogen receptor gene targeting; Diabetic nephropathy, ANG II in, RAS and; Fibrosis, as pathway to organ failure; Intrarenal angiotensin II; Proximal tubule transport, ANG II regulation of; Renal fibrosis, ANG II in; Renin-angiotensin-aldosterone system, role of, in renal disease progression; Renin-angiotensin system; Tubular hypertrophy, ANG II-induced
- Angiotensin II (ANG II) receptors
ACE and, in repair of fibrotic tissue, 474-478
functions and role of, 404-405
phenotypes of, 397-401
in proximal tubule transport, ANG II and, 425-426
see also AT₁ angiotensin II receptor; AT_{1A} angiotensin II receptor; AT_{2A} angiotensin II receptor
- Angiotensin-converting enzyme (ACE)
ANG II receptors and, in repair of fibrotic tissue, 474-478
see also Angiotensin-converting enzyme gene; Angiotensin-converting enzyme inhibitors
- Angiotensin-converting enzyme (ACE) gene, insertion/deletion polymorphism of, as risk factor for NIDDM nephropathy, 137
- Angiotensin-converting enzyme (ACE) inhibitors, 80
antagonism between AT₁ ANG II receptor and, in repair of fibrotic tissue, 478-479
for dialyzed ESRD patients, 262, 263
in IDDM nephropathy with, 115-118
in NIDDM nephropathy, 142-143
RAS blockade with, during renal development, 495-496
see also Angiotensin-converting enzyme inhibitors, renal failure related to
- Angiotensin-converting enzyme (ACE) inhibitors, renal failure related to, 67-76
hyperkalemia and, 73-74
incidence of, 68-70
management and prevention of, 74-75
pathophysiology and clinical presentation of, 70-71
reversibility of, 71-72
- Angiotensinogen receptor gene targeting, 396-403
ANG II receptor phenotypes and, 397-401
angiotensinogen phenotypes and, 396-397
and local versus systemic action of ANG II, 401-403
- ANPs, *see* Atrial natriuretic peptides
- Antibodies, *see* Monoclonal antibody(ies)
- Antihypertensive agents, *see* Hypertension and specific antihypertensive agents; *for example:* Angiotensin-converting enzyme inhibitors
- Anti-inflammatory drugs, non-steroidal, *see* Prostaglandins in cirrhosis
- Anti-lipidemic agents, *see* Lipid management
- Antilymphocyte agents, 191, 192
- Apoptosis in nephrotoxic ARF, 11-12
- Arachidonic acid derivatives, *see* Leukotrienes; Prostaglandins; Thromboxane(s); Thromboxane A₂
- ARF, *see* Acute renal failure
- Arsenic-induced nephropathy, 51
- Arterial blood volume in cirrhosis, 508-509
- Arteriovenous fistula (AVF) in ESRD, 240-243
decline in use of, 243
described, 240-241
materials used for, 241-242
with myocardial dysfunction, 264
- Assessment of ESRD patient's goals in rehabilitation program, 247-248, 250-251
- AT₁ (type 1) angiotensin II (ANG II) receptor, antagonism between ACE inhibitors and, in repair of fibrotic tissue, 478-479
- AT_{1A} (type 1A) angiotensin II (ANG II) receptor
AT₂ receptor compared with, 404-405
proximal tubule transport by ANG II and, 425-426
see also Physiology of AT_{1A} angiotensin II receptor, gene targeting approach to
- AT₂ (type 2) angiotensin II (ANG II) receptor
AT_{1A} receptor compared with, 404-405
and proximal tubule transport regulation by ANG II, 425-426
- Atrial natriuretic peptides (ANPs)
levels of, in HRS, 570
see also Atrial natriuretic peptides in cirrhosis
- Atrial natriuretic peptides (ANPs) in cirrhosis
abnormalities of, 510
see also Atrial natriuretic peptides in cirrhosis, renal effects of
- Atrial natriuretic peptides (ANPs) in cirrhosis, renal effects of, 520-529
circadian patterns of, 527

- in experimental cirrhosis, 522-525
- in human cirrhosis, 525
- perspectives on, 527-528
- pharmacological effects, 521
- plasma levels of, 521-522
- resistance to, 527
- water immersion in study of, 525-527
- Autoimmune disease, chronic cyclosporine nephrotoxicity in, 37-38
- Automated systems of dialyzer reuse, manual versus, 323
- Autonomic dysfunction with myocardial dysfunction in ESRD, 265
- Autonomic neuropathy in ESRD secondary to DM, management of, 339
- AVF, *see* Arteriovenous fistula in ESRD
- Axial heterogeneity of proximal tubule transport regulation by ANG II, 426

- BDL (bile duct ligation) models, acute and chronic, of biliary obstruction effects on renal function, 552
- Benefits, *see* Advantages and disadvantages
- Beryllium-induced nephropathy, 51
- Beta (β) blockers for hypertensive dialyzed ESRD patients, 262, 263
- Beta (β)₂ microglobulin (β_2m) amyloidosis due to HD membranes, 206
- BF, *see* Blood flow
- Bile acids, 549-562
 - biliary obstruction and, *see* Biliary obstruction, effects of biosynthesis and chemistry of, 549-550
 - oxidative stress and, *see* Oxidative stress, bile acids and plasma and urinary, in liver disease, 550-551
 - renal function and, 551-554
- Bile duct ligation (BDL) models, acute and chronic, of biliary obstruction effects on renal function, 552
- Biliary obstruction, effects of, 552-554
 - oxidative stress and, 557-558; *see also* Oxidative stress, bile acids and
 - on renal function, 552-553
 - on renal membrane function, 553-554
 - on systemic hemodynamics, 554
 - see also* Bile acids
- Bioartificial hemofilter, 383-384
- Bioartificial kidney, 381-386
 - bioartificial hemofilter and, 383-384
 - bioartificial renal tubule and, 384-385
 - implantable, 385-386
- Bioartificial renal tubule, 384-385
- Biochemical events, *see* Hyperglycemia, diabetic nephropathy and, biochemical events and cytokines in link between
- Biochemistry
 - of bile acids, 549-550
 - of PGs, 530-534
- Biocompatibility of HD membranes, 202-205
 - cytokine hypothesis of, 204-205
 - defined, 202-203
 - enhancing, 209
 - neutrophil and complement activation as indices of, 203-204
- Blood flow (BF)
 - in cirrhosis, 506
 - renal, PG effects on, 533
- Blood pressure
 - effects of AT_{1A} ANG II receptor deficiency on regulation of, 406-408
 - see also* Hypertension
- Blood purification for hepatic failure, *see* Extracorporeal blood purification for hepatic failure
- Blood transfusions, number of received, as risk factor for HCV infection in dialyzed ESRD patients, 347
- Blood volume, arterial and central, in cirrhosis, 508-509
- Bone disease, *see* Renal osteodystrophy
- Bone effects of metabolic acidosis in predialysis CRF patients, 279-280
- Bone marrow transplantation, nephrotoxicity of, 60-62
- Brequinar sodium, 368

- Ca (calcium), disturbed homeostasis of cell, in nephrotoxic ARF, 7-8
- Ca (calcium) channel blockers
 - in dialyzed ESRD patients, 262, 263
 - in NIDDM nephropathy, 143-144
- Cadaver kidneys, strategies to enhance procurement of, 376-379
- Cadmium nephropathy, 48-49
- Calcification and fibrosis, myocardial, and myocardial dysfunction in ESRD, 265
- Calcitonin-gene related peptide (CGRP) in cirrhosis, 510
- Calcium, *see* Ca; Ca channel blockers
- Cancer therapy, renal toxicities of, 54-66
 - and of bone marrow transplantation, 60-62
 - of carboplatin, 55-56
 - of cisplatin, 54-55
 - of cyclophosphamide, 56
 - of gallium nitrate, 60
 - of ifosfamide, 56-57
 - of IL-2, 59-60
 - of methotrexate, 58-59
 - of mitomycin C and plicamycin, 58
 - of nitrosoureas, 57-58
- CAPD, *see* Continuous ambulatory peritoneal dialysis for ESRD
- Capitation, *see* Monthly Capitation payment in Medicare Program
- Carboplatin, nephrotoxicity of, 55-56
- Carcinogenicity of disinfectants used for dialyzers, 325
- Cardiovascular system in ESRD
 - effects of metabolic acidosis on, in predialysis patients, 280
 - see also* Myocardial dysfunction in ESRD
- Catecholamines in cirrhosis, 510-511
- Catheters, permanent vascular access with, 242-243
- Causes of ESRD, 170-175
 - currently attributed, 170-171
 - potentially unattributed, 171-172
 - and reasons for increased incidence of ESRD, 172-174
 - see also specific causes of ESRD; for example: Diabetes mellitus, ESRD secondary to*
- CCPD (continuous cycling peritoneal dialysis) for ESRD, 176, 179, 183

- Cell Ca (calcium), disturbed homeostasis of, in nephrotoxic ARF, 7-8
- Cellular energetics, nephrotoxic ARF and alterations in, 4-5
- Cellulosic hemodialysis (HD) membranes, 196-198
regenerated, 196-197
- Central blood volume in cirrhosis, 508-509
- Central circulation time in cirrhosis, 506-508
- Central sympatholytic agents for hypertensive dialyzed ESRD patients, 262-263
- CGRP (calcitonin-gene related peptide) in cirrhosis, 510
- Chemical disinfection of dialyzers, 322-323
- Chemical infusion, residual, with reused dialyzers, 325-326
- Chemical toxicity of reused dialyzers, 324-325
- Chemistry, *see* Biochemistry
- Cholestasis
oxidative stress and, 556
see also Bile acids
- Chromium-induced nephropathy, 51
- Chronic bile duct ligation (BDL) models of biliary obstruction effects on renal function, 552
- Chronic cyclosporine nephrotoxicity, 35-40
in autoimmune disease, 37-38
pathophysiology of, 38-40
in transplantation, 35-37
- Chronic lead nephropathy, 46-47
- Chronic renal failure, *see* End-stage renal disease
- Chronic renal replacement therapy *see* Continuous renal replacement therapy
- Chronic volume overload, and myocardial dysfunction in ESRD, 264
- Cigarette smoking, as risk factor for NIDDM nephropathy, 137
- Circadian patterns of ANPs, renal effects of, in cirrhosis, 527
- Circulating angiotensin II (ANG II), elevated, and repair of fibrotic tissue, 480-481
- Circulation time, central, in cirrhosis, 506-508
- Circulatory abnormalities in cirrhosis, 505-519
in blood volume, 508-509
in hemodynamics, *see* Systemic hemodynamics in cirrhosis
in vasoactive substances, *see* Vasoactive substances, abnormalities of, in cirrhosis
- Cirrhosis, *see* Atrial natriuretic peptides in cirrhosis; Circulatory abnormalities in cirrhosis; Prostaglandins in cirrhosis
- Cisplatin, nephrotoxicity of, 54-55
- Clinical features and presentation
of ACE-related renal failure, 70-71
of CM-AN, 16-17
of HRS, 563-564
of TB in dialyzed ESRD patients, 355-356
- Clinical sequelae, *see* Complication(s)
- CM-AN, *see* Contrast media-associated nephropathy
- Collagen at site of tissue repair in fibrosis, 473-474
- Collapse fibrosis, described, 468
- Combined filter/sorbent systems, blood purification with, in hepatic failure, 581
- Comorbid conditions with ESRD
secondary to DM, role of AGEs in pathogenesis of, 340-342
see also Myocardial dysfunction in ESRD; Therapy and management of comorbid conditions in ESRD secondary to DM
- Compartmentalization of intrarenal ANG II, 416-419
- Complement, activation of, as index of HD membrane biocompatibility, 203-204
- Complication(s)
of ESRD, avoidance of, 389
related to choice of HD membrane, 205-208
see also Comorbid conditions with ESRD; Complication(s) of dialyzer reuse for ESRD
- Complication(s) of dialyzer reuse for ESRD, 323-328
chemical toxicity as, 324-325
concentration control problems as, 326-328
residual chemical infusion as, 325-326
- Composition, *see* Materials and composition
- Confrontation era, legislative and regulatory process of Medicare ESRD Program in, 163-164
- Confusion era, legislative and regulatory process of Medicare ESRD Program in, 161-162
- Consent for organ donation, presumed, 378
- Continued assessment of ESRD patient's goals in rehabilitation program, 250-251
- Continuous ambulatory peritoneal dialysis (CAPD) for ESRD, 226-237
dose of, *see* Dose, CAPD, for ESRD
HD compared with, 234-235; *see also* Hemodialysis for ESRD
in pre-Medicare era, 227
as RRT option, 176, 177, 179, 181, 183, 185
- Continuous cycling peritoneal dialysis (CCPD) for ESRD, 176, 179, 183
- Continuous quality improvement (CQI) in ESRD care, 221-223
evidence-based medicine and, 222-223
government and, 221-222
information systems and, 223
RPA and, 222
- Continuous renal replacement therapy (CRRT)
for blood purification in hepatic failure, 578-580
see also Acute renal failure, CRRT of; Continuous ambulatory peritoneal dialysis for ESRD; Continuous cycling peritoneal dialysis; End-stage renal disease, CRRT of
- Contraindications to renal transplantation referral, 180
- Contrast media-associated nephropathy (CM-AN), 15-26
clinical features of, 16-17
incidence of, 17
low versus high osmolality contrast media and, 19-21
pathogenesis of, 15-16
prophylaxis of, 21-22
risk factors for, 17-18
- Coronary artery disease in ESRD secondary to DM, management of, 338-339
- Cost-effectiveness of rehabilitation program for ESRD patient, 251
- Cost reduction
in Medicare Program, regulations for, 164-166
see also Future dialysis facility
- CQI, *see* Continuous quality improvement in ESRD care
- Creatinine clearance, as measure of CAPD dose adequacy, 229-232
- CRF (chronic renal failure), *see* End-stage renal disease
- CRRT, *see* Continuous renal replacement therapy
- Currently attributed causes of ESRD, 170-171

- Cycling peritoneal dialysis, continuous, for ESRD, 176, 179, 183
- Cyclophosphamide, 56
- Cyclosporine
- characteristics and properties of, 189
 - mechanisms of action of, 190
 - nephrotoxicity of, 34-35; *see also* Chronic cyclosporine nephrotoxicity
- Cyclosporine A (Neoral), 365-366
- Cytokine(s)
- CRRT effects on, 313
 - redox regulation of cytokine gene expression, biliary obstruction, oxidative stress and, 557
 - see also* Cytokine hypothesis; Hyperglycemia, diabetic nephropathy and, biochemical events and cytokines in link between
- Cytokine hypothesis of HD membrane biocompatibility, 204-205
- Cytoskeleton, disruption of, and nephrotoxic ARF, 10-11
- Daily dosing, once-, of aminoglycoside, effects of, on aminoglycoside nephrotoxicity, 29-30
- DCCT (Diabetes Control and Complications Trial) of glycemic control in IDDM nephropathy, 106-109
- Deficiency in AT_{1A} angiotensin II (ANG II) receptor, effects of, 405-410
- on ANG II responses, 408-410
 - on blood pressure regulation, 406-408
 - on growth and development, 405-406
- Demographics
- of ESRD secondary to DM, 331-332
 - of NIDDM nephropathy, 132-135
 - see also* Age; Sex
- 15-Deoxyspergualin, immunosuppression with, 369
- Depression with ESRD secondary to DM, management of, 340
- Development, *see* Growth and development
- Diabetes Control and Complications Trial (DCCT) of glycemic control in IDDM nephropathy, 106-109
- Diabetes mellitus (DM)
- with and without renal insufficiency, as risk factor for CM-AN, 18-19
 - see also* Diabetic nephropathy
- Diabetes mellitus (DM), ESRD secondary to, 331-345
- comorbid conditions with, role of AGEs in pathogenesis of, 340-342; *see also* Therapy and management of comorbid conditions in ESRD secondary to DM
 - demographics and consequences of DM epidemic, 331-332
 - mortality with, 335
 - RRT for, 180-182, 333-335
- Diabetic enteropathy in ESRD secondary to DM, management of, 339
- Diabetic nephropathy
- introduction to, 77-79
 - see also* Diabetes mellitus, ESRD secondary to; Diabetic nephropathy, ANG II in, RAS and; Glycemic control; Hyperglycemia; Non-insulin-dependent diabetes mellitus nephropathy; Renal hemodynamic basis of diabetic nephropathy; Therapy and management of IDDM nephropathy
- Diabetic nephropathy, ANG II in, RAS and, 441-447
- activity of intrarenal RAS in, 442-444
 - and mechanisms of RAS-induced renal injury, 444
 - RAS genotypes and, 444-445
 - and RAS in pathogenesis of diabetic nephropathy, 441-442
 - systemic RAS in, 442
- Diabetic retinopathy, *see* Retinopathy, diabetic
- Diagnosis-related groups (DRGs), Medicare reimbursement and, 166
- Diagnosis of TB in dialyzed ESRD patients, 356
- Dialysate, HD, in ESRD, 216
- Dialysis
- for HRS, 571, 576
 - see also* Adequacy of dialysis; Dose, dialysis; Dialyzer(s); Continuous renal replacement therapy; End-stage renal disease, RRT of; Hemodialysis and entries beginning with terms: Dialysis, Dialyzed
- Dialysis facility
- type of, and frequency of dialyzer reuse, 322
 - see also* Future dialysis facility
- Dialysis machines, shared, by ESRD patients, HCV infection transmission through, 348
- Dialysis staff
- in future dialysis facility, 303-304
 - see also* Dialysis staff, transmission of infection to
- Dialysis staff, transmission of infection to
- of HCV infection by needle-stick injury, 348
 - patient-to-staff transmission of HIV infection in dialysis unit, 353
- Dialysis ultrafiltrate, HCV infection transmission through, 348-349
- Dialysis unit
- HIV transmission in, 352-354
 - see also* Nosocomial infection of HCV infection
- Dialyzed end-stage renal disease (ESRD) patients
- TB in, 355-358
 - see also* Dialyzed end-stage renal disease patients, hypertension in; Hemodialysis for ESRD; Hepatitis C virus infection in dialyzed ESRD patients; Human immunodeficiency virus infection in dialyzed ESRD patients; Optimal dialysis dose for ESRD; Peritoneal dialysis for ESRD
- Dialyzed end-stage renal disease (ESRD) patients, hypertension in, 259-264
- factors contributing to, 259, 261
 - management of, 261-263
- Dialyzer(s) (dialyzer membrane), 196-213
- biocompatibility of, *see* Biocompatibility of HD membranes
 - clinical sequelae of choice of, 205-208
 - composition and structure of, 196-198
 - future developments in, 209-210
 - HCV infection transmission through, 348-349
 - reuse of, *see* Dialyzer reuse for ESRD
 - transport properties of, 198-202
- Dialyzer (dialyzer membrane) reuse for ESRD, 321-330
- complications of, *see* Complication(s) of dialyzer reuse for ESRD
 - cost reduction with, 165
 - effects of, 208-209

- epidemiology of, 321-322
- future of, 328-329
- HCV infection transmission through, 349
- history of, 321
- manual versus automated systems of, 323
- types of, 322-323
- Dietary management of diabetic nephropathy
 - with dietary protein restriction, 118
 - of NIDDM nephropathy, 144
- Direct vasodilators for hypertensive dialyzed ESRD patients, 262, 263
- Disadvantages, *see* Advantages and disadvantages
- Disinfection of dialyzers, 322-327
 - disinfectant concentration control problems in, 326-327
 - methods of, 322-323
 - residual chemical infusion and, 325-326
 - and toxicity of disinfectants, 324-325
- Diuretics, 261-263
 - PGs and, in cirrhosis, 540
- DM, *see* Diabetes mellitus
- Donor(s), kidney
 - need to relax criteria for selection of, to expand donor pool, 378; *see also* Donor pool, expanding
 - see also* Renal transplantation for ESRD
- Donor pool, expanding, 373-380
 - with LURDs, 375-376, 378
 - strategies to enhance procurement of cadaver kidneys, 376-379
 - by using older donors, 373-375
- Dose
 - of antitubercular drugs in dialyzed ESRD patients, 357
 - effects of once-daily aminoglycoside, on aminoglycoside nephrotoxicity, 29-30
 - see also* Dose, dialysis
- Dose, CAPD, for ESRD, 228-234
 - adequacy of, 228-232
 - nutrition and, 232-234
 - see also* Optimal dialysis dose for ESRD
- Dose, dialysis
 - with CRRT of ARF, 309-310
 - see also* Dose, CAPD, for ESRD
- DRGs (diagnosis-related groups), Medicare reimbursement and, 166
- Drugs, *see* Cancer therapy, renal toxicities of; Nephrotoxicity of immunosuppressive drug(s); Pharmacology and specific drugs; for example: Angiotensin-converting enzyme inhibitors
- Duration
 - of ESRD prior to dialysis, as risk factor for HCV infection, 347
 - of NIDDM, as risk factor for NIDDM nephropathy, 135
- Efferent event(s) in HRS, 565-571
 - adenosine role, 570-571
 - decreased ANP levels as, 570
 - elevated ET concentrations as, 568-570
 - enhanced NO production as, 567-568
 - increased sympathetic nervous system activity as, 566-567
 - RAS activation as, 565-566
 - renal PG alterations as, 566
- Efficiency of HD membrane, 202
- Effluent, disposal of PD, of HIV-infected ESRD patients, 354
- Elderly, the, *see* entries beginning with term: Older
- Endothelins (ETs)
 - in biliary obstruction, 558
 - in cirrhosis, 511-512
 - concentrations of, in HRS, 568-570
 - in diabetic nephropathy, 86-87
- Endotoxemia, biliary obstruction, oxidative stress and, 557
- End-stage renal disease (ESRD)
 - described, 152
 - history of, 153-154
 - optimization of management of, 387-390
 - see also* Acute renal failure, CRRT of; Bioartificial kidney; Causes of ESRD; Diabetes mellitus, ESRD secondary to; Dialyzed end-stage renal disease patients; Dialyzer(s); Donor pool, expanding; End-stage renal disease, RRT of; Future dialysis facility; Medicare End-stage Renal Disease Program; Myocardial dysfunction in ESRD; Optimal dialysis dose for ESRD; Predialysis chronic renal failure patients; Rehabilitation of ESRD patient
- End-stage renal disease (ESRD), RRT of, 176-185
 - with diabetes mellitus, 180-182, 333-334; *see also* Diabetes mellitus, ESRD secondary to
 - in elderly patients, 183-184
 - with HIV infection, 182-183, 351; *see also* Human immunodeficiency virus infection in dialyzed ESRD patients
 - patient preparation for, 177-180
 - patient survival with, *see* Patient survival, ESRD, with RRT
 - quality of life with, 177
 - see also* Dialyzed end-stage renal disease patients; Hemodialysis for ESRD; Peritoneal dialysis for ESRD; Renal transplantation for ESRD
- Energetics, alterations in cellular, nephrotoxic ARF and, 4-5
- Enteropathy, diabetic, in ESRD secondary to DM, management of, 339
- Environmental contamination of reused dialyzers, 324
- Environmental renal disease, *see* Occupational and environmental renal disease
- Epidemic, DM, consequences of, 331-332
- Epidemiology
 - of dialyzer reuse, 321-322
 - see also* Incidence; Prevalence
- EPO (erythropoietin), *see* entries beginning with terms: Recombinant human erythropoietin
- Equipment, HD, 214-216
- Erythropoietin, *see* entries beginning with terms: Recombinant human erythropoietin
- ESRD, *see* End-stage renal disease
- ET(s), *see* Endothelins
- Etiology of ESRD, *see* Causes of ESRD
- Evidence-based therapy of ESRD
 - CQI in, 222-223
 - in optimization of ESRD management, 389
- Exemption process, Medicare reimbursement and, 167
- Experimental aminoglycoside nephroprotection, 29
- Experimental cirrhosis, renal effects of ANPs in, 522-525
- External shunts, as vascular access for HD, 239-240
- Extracorporeal blood purification for hepatic failure, 576-582
 - with combined filter/sorbent systems and hybrid organ systems, 581

- with CRRT, 578-580
- with hemodialysis, 577-578
- with hemoperfusion, 580
- with TPE, 580-581
- Fibrosis
 - myocardial calcification and, and myocardial dysfunction in ESRD, 265
 - see also* Fibrosis, as pathway to organ failure; Renal fibrosis
- Fibrosis, as pathway to organ failure, 467-491
 - tissue repair in, *see* Tissue repair in fibrosis
 - types of fibrosis, 467-469
- Filter/sorbent systems, combined, blood purification with, in hepatic failure, 581
- Financial incentives to enhance organ donation, 378-379
- Fistula, *see* Arteriovenous fistula in ESRD
- FK506 (tacrolimus; Prograf®)
 - mechanisms of action of, 190
 - nephrotoxicity of, 40-41
 - properties and characteristics of, 189-190, 367-368
- Fluid transport by HD membranes, 198
- Flux of HD membranes, 202
- Frequency of dialyzer reuse, dialysis facility type and, 322
- Future dialysis facility, 298-305
 - Capitation Payment and, 300-301
 - impact of managed care on, 298-299
 - physician supply and, 302-303
 - quality improvement in, 301-302
 - reorganization of nephrology and, 299-300
 - social environment of, 303
 - staffing and organization of, 303-304
- Gallium nitrate, nephrotoxicity of, 60
- Gastroparesis in ESRD secondary to DM, management of, 339
- Gender, as risk factor for NIDDM nephropathy, 135-136
- Gene(s)
 - ACE, insertion/deletion polymorphism of, as risk factor for NIDDM nephropathy, 137
 - expression of cytokine, redox regulation of, biliary obstruction and oxidative stress and, 557
 - see also* Gene targeting
- Gene targeting
 - RAS, effects of, on renal development, 496-497
 - see also* Angiotensinogen receptor gene targeting; Physiology of type AT₁ angiotensin II receptor, gene targeting approach to
- Genotypes, RAS, in diabetic nephropathy, 444-445
- GFR, *see* Glomerular filtration rate
- Glomerular filtration rate (GFR)
 - PG effects on, 533
 - reversible and irreversible causes of decreased, in ESRD, 178
 - see also* Glomerular filtration rate in diabetic nephropathy
- Glomerular filtration rate (GFR) in diabetic nephropathy, 93-98
 - effects of hemodynamic alterations on, 93-95
 - hyperfiltration and, 96-98
 - in IDDM nephropathy, *see* Glomerular filtration rate in IDDM nephropathy, therapeutic interventions and
 - in NIDDM nephropathy, 124-126, 130, 137, 138, 142, 143
- Glomerular filtration rate (GFR) in IDDM nephropathy, therapeutic interventions and
 - effects of, 114-117, 120
 - glycemic control effects on, 101, 104, 109-110
- Glomerular permeability, selective, in NIDDM nephropathy, 126-129
- Glomerulonephritis, immunologically-mediated mercury-induced, 49-50
- Glycation, nonenzymatic, in diabetic nephropathy, 83-85
- Glycation end-products, *see* Advanced glycation end-products
- Glycemic control
 - and NIDDM nephropathy, 142
 - see also* Glycemic control, relationship between IDDM nephropathy development and
- Glycemic control, relationship between IDDM nephropathy development and, 101-113
 - controversies over, 109-110
 - DCCT of, 106-109
 - natural history of IDDM nephropathy and, 101-102
 - studies on, 103-106
- Glycemic threshold for IDDM nephropathy, 109
- Goals of ESRD patient, assessing and identifying, in rehabilitation program, 247-248, 250-251
- Government
 - role of, in CQI of ESRD care, 221-222
 - see also* Medicare End-stage Renal Disease Program
- Graft, *see* Renal graft outcome; Transplantation
- Growth and development
 - effects of deficiency in AT_{1A} ANG II receptor on, 405-406
 - tubular, ANG II influence on, 451-452
 - see also* Renin-angiotensin system during renal development
- Growth factor, *see* Transforming growth factor- β ; Transforming growth factor- β_1
- HCFA (Health Care Financing Administration), *see* Medicare End-stage Renal Disease Program
- HCQIP (Health Care Quality Improvement Program) for ESRD care, 220-221
- HCV infection, *see* Hepatitis C virus infection in dialyzed ESRD patients
- HD, *see* Hemodialysis
- Health Care Financing Administration, *see* Medicare End-stage Renal Disease Program
- Health care professionals
 - organ donation by, strategies to enhance, 376-377
 - see also* Dialysis staff; Physician supply
- Health Care Quality Improvement Program (HCQIP) for ESRD care, 220-221
- Health status and outcome of ESRD patients, optimization of, 389
- Heart fibrosis
 - described, 469
 - see also* Heart fibrosis, tissue repair in
- Heart fibrosis, tissue repair in, 472-481
 - ACE and ANG II receptors in, 474-477
 - ACE inhibition and AT₁ ANG II receptor antagonism in, 478-479
 - collagen at site of repair in, 473

- elevated circulating ANG II and, 480-481
- inflammatory cell responses in, 469
- myofibroblasts in, 471-472
- TGF- β_1 and, 472-473
- Heart transplantation, chronic cyclosporine nephrotoxicity in, 35-36
- Heat disinfection of dialyzers for reuse, 322-323
- Hemodialysis (HD)
 - for blood purification in hepatic failure, 577-578
 - see also* Hemodialysis, vascular access for; Hemodialysis for ESRD
- Hemodialysis (HD), vascular access for, 239-245
 - arteriovenous fistula as, *see* Arteriovenous fistula in ESRD
 - external shunts as, 239-240
 - future, 243-244
 - needle-less access as, 242
 - permanent catheter access as, 242-243
- Hemodialysis (HD) for ESRD
 - CAPD compared with, 234-235; *see also* Continuous ambulatory peritoneal dialysis for ESRD
 - equipment used in, 214-216
 - HCV infection transmission with, 347
 - as RRT option, 176, 177, 179-185
 - types of dialysate used in, 216
 - see also* Dialyzer(s); Hemodialysis, vascular access for; Hemodialysis for ESRD secondary to DM; Quality improvement in ESRD care, Medicare Program and
- Hemodialysis (HD) for ESRD secondary to DM, 333
 - importance of Kt/V in, 335-336
- Hemodynamics, *see* Renal hemodynamic basis of diabetic nephropathy; Systemic hemodynamics
- Hemofilter, bioartificial, 383-384
- Hemoperfusion, blood purification with, in hepatic failure, 580
- Hepatic failure, *see* Extracorporeal blood purification for hepatic failure
- Hepatitis C virus (HCV) infection in dialyzed ESRD patients, 346-350
 - IFN α therapy of, 350
 - prevalence of, 346-347
 - risk factors for, 347-348
 - transmission of, *see* Nosocomial transmission of HCV infection
- Hepatorenal syndrome (HRS), 563-575
 - clinical features of, 563-564
 - efferent events in, *see* Efferent event(s) in HRS
 - pathogenesis of, 564-565
 - PGs in, 541-542
 - therapy of, 571-572, 576
- Heterogeneity, axial, of proximal tubule transport by ANG II, 425-426
- High osmolality contrast media (HOCM), LOCM versus, and CM-AN, 19-21
- Histology, renal, in NIDDM nephropathy, proteinuria and, 140-142
- History
 - of association between anemia and ESRD, 270
 - of dialysis concepts and state of the art prior to 1972, 286-287
 - of dialyzer reuse, 321
 - of ESRD, 153-154
 - of Medicare Program, *see* Legislative and regulatory process in Medicare ESRD Program
 - past and present concepts of uremia, 285-286
 - of quality improvement in ESRD care, technical and political events in, 218, 219
 - of renal transplantation and immunosuppression, 188-189
 - see also* Natural history
- HIV infection, *see* Human immunodeficiency virus infection in dialyzed ESRD patients
- HOCM (high osmolality contrast media), LOCM versus, and CM-AN, 19-21
- Home hemodialysis (HD) for ESRD, 184-185
- Homeostasis disturbances in nephrotoxic ARF, 7-10
 - of cell Ca, 7-8
 - of phospholipid, 8-10
- Hormonal effects of ANPs, 521
- HPTH, *see* Hyperparathyroidism
- HRS, *see* Hepatorenal syndrome
- Human cirrhosis, *see* Atrial natriuretic peptides in cirrhosis; Circulatory abnormalities in cirrhosis; Prostaglandins in cirrhosis
- Human erythropoietin, *see entries beginning with terms:* Recombinant human erythropoietin
- Human immunodeficiency virus (HIV) infection in dialyzed ESRD patients, 350-352
 - choice of RRT for, 182-183, 352
 - disposal of PD effluent in, 354
 - nosocomial transmission of, 352-354
 - patient survival with, 352
 - postexposure prophylaxis of HIV infection, 354-355
 - prevalence of, 351-352
- Hybrid organ systems, blood purification with, in hepatic failure, 581
- Hydrocarbon nephropathy, light, 51-52
- Hyperfiltration in diabetic nephropathy, 96-98
- Hyperglycemia
 - in ESRD secondary to DM, management of, 336-337
 - in NIDDM nephropathy, 136-137, 142
 - see also* Glycemic control, relationship between IDDM nephropathy development and; Hyperglycemia, diabetic nephropathy and, biochemical events and cytokines in link between
- Hyperglycemia, diabetic nephropathy and, biochemical events and cytokines in link between, 80-92
 - conclusions on, 87-88
 - endothelins in, 86-87
 - in vitro model of, 80-81
 - nonenzymatic glycation in, 83-85
 - oxidative stress in, 85-86
 - PKC in, 82-83
 - polyol pathway in, 81-82
 - thromboxane in, 86
- Hyperkalemia, and ACE-related renal failure, 73-74
- Hyperparathyroidism (HPTH)
 - myocardial dysfunction and, in ESRD, 264
 - secondary, in predialysis CRF patients, pathogenesis of, 275
- Hypertension
 - and intrarenal ANG II regulation, 419-420
 - low-level lead exposure, renal disease and, 47-48
 - see also* Hypertension in ESRD; Hypertension in IDDM

- nephropathy; Hypertension in NIDDM nephropathy and specific antihypertensive agents
- Hypertension in ESRD
secondary to DM, management of, 336
see also Dialyzed end-stage renal disease patients, hypertension in
- Hypertension in IDDM nephropathy
DCCT effects on, 109
therapy of, 114-118
- Hypertension in NIDDM nephropathy
hypertension as risk factor for NIDDM nephropathy, 136
therapy of, 142-144
- Hypertrophy
left ventricular, and myocardial dysfunction in ESRD, 263-264
tubular, *see* Tubular hypertrophy, ANG II-induced
- IDDM (insulin-dependent diabetes mellitus), *see* Diabetic nephropathy; Glycemic control, relationship between IDDM nephropathy development and; Therapy and management of IDDM nephropathy
- Identification of ESRD patient's goals in rehabilitation program, 247-248
- IFN α (interferon alpha) therapy of HCV infection in dialyzed ESRD patients, 350
- Ifosfamide, nephrotoxicity of, 56-57
- IHD (intermittent hemodialysis) of ESRD, survival with CRRT and, compared, 315
- IL-2 (interleukin-2), 59-60
- Immune function, aging and changes in, renal transplantation in elderly ESRD patients and, 184
- Immunologically-mediated glomerulonephritis, mercury-induced, 49-50
- Immunophilins, *see* Cyclosporine; Cyclosporine A; FK506; Rapamycin
- Immunosuppression, *see* Immunosuppression in renal transplantation for ESRD; Nephrotoxicity of immunosuppressive drug(s) and specific drugs
- Immunosuppression in renal transplantation for ESRD, 188-191, 364-372
with brequinar sodium, 368
history of, 188-189
with immunophilins, *see* Cyclosporine; Cyclosporine A; FK506; Rapamycin
with leflunomide and 15-deoxyspergualin, 369
with monoclonal antibodies, *see* Monoclonal antibody(ies), immunosuppression with
with mycophenolate mofetil, 190-191, 366-367
- Implantable bioartificial kidney, 385-386
- Implementation of rehabilitation program for ESRD patient, 246-251
assessment and identification of patient's goals in, 247-248, 250-251
individualized plan development in, 249-250
- Incidence
of ACE-related renal failure, 68-70
of CM-AN, 17
of ESRD, *see* Incidence of ESRD
see also Prevalence and specific conditions
- Incidence of ESRD
increase in, 172-174
- increase in renal disease and, 174
- Individualized rehabilitation plan for ESRD patient, 248-250
- Induction of tolerance to renal transplantation, 191, 192
- Infection(s)
breakdown in standard infection control practices in dialysis unit, and HCV virus transmission, 348; *see also* Hepatitis C virus infection in dialyzed ESRD patients due to dialyzer reuse, 327
see also Human immunodeficiency virus infection in dialyzed ESRD patients; Tuberculosis
- Inflammatory cell responses, and tissue repair in fibrosis, 469-471
- Information systems, CQI in ESRD care and, 223
- Injury
needle-stick, transmission of HCV infection to dialysis staff by, 348
renal, *see* Renal injury in diabetic nephropathy
- Insertion/deletion polymorphism of ACE gene, as risk factor for NIDDM nephropathy, 137
- Insulin-dependent diabetes mellitus (type I diabetes mellitus), *see* Diabetic nephropathy; Glycemic control, relationship between IDDM nephropathy development and; Therapy and management of IDDM nephropathy
- Integrity of reused dialyzers, 327-328
- Intellectual rehabilitation of ESRD patient, 250
- Intensive care unit, *see* Acute renal failure, CRRT of
- Interferon alpha (IFN α) therapy of HCV infection in dialyzed ESRD patients, 350
- Interleukin-2 (IL-2), 59-60
- Intermittent hemodialysis (IHD) of ESRD, survival with CRRT and, compared, 315
- Intrahepatic porto-systemic shunt, transjugular, for HRS, 572
- Intrarenal angiotensin II (ANG II), 412-422
compartmentalization of, 416-419
levels of, 413-416
in proximal tubule transport, 427-429
regulation of, in normotensive and hypertensive states, 419-420
- Intrarenal renin-angiotensin system (RAS) in diabetic nephropathy, 442-444
- Intratubular renin-angiotensin system (RAS) in ANG II-induced tubular hypertrophy, 449
- In vitro model of hyperglycemia in diabetic nephropathy, 80-81
- In vitro testing of HD membrane transport properties, 198
- Irreversibility of decreased GFR in ESRD, 178
- F₂-Isoprostanes, oxidative stress and formation of, 557-558
- Kidney donors, *see* Donor(s), kidney
- Kidney-pancreas transplantation for ESRD
pancreas transplantation following kidney transplantation versus simultaneous, 188
secondary to DM, 334-335
- Kinetics, urea, as measure of CAPD dose adequacy, 229-232; *see also* Kt/V
- Knockout, gene, *see* Gene targeting
- Kt/V
and optimization of dialysis for ESRD, 291-292
with PD of ESRD secondary to DM, 335-336
- Lead nephropathy, 46-48

- Leflunomide, 369
 Left ventricular hypertrophy (LVH), and myocardial dysfunction in ESRD, 263-264
 Legislative and regulatory process in Medicare ESRD Program
 background of, 153
 in confrontation era, 163-164
 in confusion era, 161-162
 and creation of Medicare, 161-162
 initial problem with, 162-163
 national, 154-159
 pre-Medicare situation and, 160-161
 reimbursement and, *see* Reimbursement, Medicare
 Leukotrienes (LTs)
 in biliary obstruction, 558
 biochemical and physiological aspects of, 534
 in cirrhosis, 542-543
 Light hydrocarbon nephropathy, 51-52
 Lipid management
 in IDDM nephropathy, 119-120
 of lipid abnormalities in ESRD secondary to DM, 338
 Liver, *see* entries beginning with term: Liver and element: Hepat-
 Liver disease, kidney in
 introduction to, 503-504
 see also Atrial natriuretic peptides; Bile acids; Circulatory abnormalities in cirrhosis; Extracorporeal blood purification for hepatic failure; Hepatorenal syndrome; Prostaglandins in cirrhosis
 Liver fibrosis
 described, 469
 see also Liver fibrosis, tissue repair in
 Liver fibrosis, tissue repair in
 ACE and ANG II receptors in, 477
 ACE inhibition and AT₁ ANG II receptor antagonism in, 480
 collagen at site of repair in, 474
 inflammatory cell response and, 471
 myofibroblasts and, 472
 Liver transplantation, orthotopic, for HRS, 571-572
 Living-related donors (LRDs), 374, 375
 Living-unrelated donors (LURDs), 191-192
 expanding donor pool by using, 375-376, 378
 Local action of ANG II, systemic versus, 401-403
 LOCM (low osmolality contrast media), HOCM versus, and CM-AN, 19-21
 Loss of vascular access in HD, 241
 Low-level lead exposure, renal disease, hypertension and, 47-48
 Low osmolality contrast media (LOCM), HOCM versus, and CM-AN, 19-21
 LRDs (living-related donors), 374, 375
 LTs, *see* Leukotrienes
 Lung fibrosis
 described, 469
 see also Lung fibrosis, tissue repair in
 Lung fibrosis, tissue repair in, 470-474
 ACE and ANG II receptors in, 477
 ACE inhibition and AT₁ ANG II receptor antagonism in, 480
 collagen at site of repair in, 474
 inflammatory cell response and, 470-471
 myofibroblasts in, 472
 TGF- β_1 in, 473
 LURDs, *see* Living-unrelated donors
 LVH (left ventricular hypertrophy), and myocardial dysfunction in ESRD, 263-264

 β (beta)₂M (microglobulin) amyloidosis, HD membranes and, 206
 Malnutrition in ESRD secondary to DM, management of, 337-338
 Managed care, impact of, on future dialysis facility on, 298-299
 Manual systems of dialyzer reuse, automated versus, 323
 Materials and composition
 of AVF, 241-242
 of HD membranes, 196-198
 Medicare End-stage Renal Disease (ESRD) Program
 future of, 159
 and history of ESRD, 153-154
 introduction to, 149-151, 253-256
 see also End-stage renal disease; Legislative and regulatory process in Medicare ESRD Program; Quality improvement in ESRD care, Medicare Program and
 Membranes, HD, *see* Dialyzer(s)
 Mercury, 49-50
 Mesangial cells, PG effects on function of, 533
 Metabolic acidosis in ESRD
 myocardial dysfunction and, 265
 in predialysis patients, 277-280
 Metabolism
 of mercury, renal disease and, 49
 PGI₂, in cirrhosis, 543-544
 Method II of Medicare reimbursement, 166
 Methotrexate, 58-59
 Microalbuminuria in IDDM nephropathy, DCCT effects on, 106-109
 β_2 Microglobulin (β_2 m) amyloidosis, HD membranes and, 206
 Middle molecules
 enhancing HD membrane removal of, 209
 HD membrane transport of, 199-200
 Minorities, strategies to enhance organ donations by, 377-378
 Mitomycin C, 58
 Mitramycin (plicamycin), 58
 MMF (mycophenolate mofetil), 190-191, 366-367
 Monoclonal antibody(ies), immunosuppression with, 369-370
 with OKT3, 191, 369
 Monthly Capitation payment in Medicare Program, 167
 and future dialysis facility, 300-301
 Morphology, renal, in NIDDM nephropathy, 128-130
 Mortality, ESRD
 due to reused dialyzer, 328
 secondary to DM, 335
 in U.S., 289-290
 Motor neuropathy in ESRD secondary to DM, management of, 339
 Multiple myeloma, as risk factor for CM-AN, 19
Mycobacteria chelonae infections, reused dialyzer and, 327

- Mycophenolate mofetil (S 61143; MMF), 190-191, 366-367
- Myocardial dysfunction in ESRD, 257-269
- anemia and, 257-260, 264
 - hyperparathyroidism and, 264
 - hypertension and, *see* Dialyzed end-stage renal disease patients, hypertension in
- LVH and, 263-264
- management of, 265-266
 - metabolic acidosis, autonomic dysfunction and, 265
 - myocardial fibrosis and calcification and, 265
- Myocardial fibrosis and calcification, and myocardial dysfunction in ESRD, 265
- Myofibroblasts in tissue repair in fibrosis, 471-472
- Na transport, *see* Sodium transport, PG effects on
- National Cooperative Dialysis Study (NCDS), 287-289
- National Health Institutes (NIH), and optimization of dialysis, 290-291
- National legislation for Medicare ESRD Program, 154-159
- Natriuretic peptide, *see* Atrial natriuretic peptides
- Natural history
- of IDDM nephropathy, 101-102
 - of NIDDM nephropathy, 137-139
- NCDS (National Cooperative Dialysis Study), 287-289
- Needle-less vascular access for HD, 242
- Needle-stick injury, transmission of HCV infection to dialysis staff by, 348
- Neoral (cyclosporine A), 365-366
- Nephrologists, supply of, in future dialysis facility, 302-303
- Nephrology, reorganization of, and future dialysis facility, 299-300
- Nephroprotection, experimental aminoglycoside, 29
- Nephrotoxicity, *see* Nephrotoxicity of immunosuppressive drug(s); Toxic nephropathies
- Nephrotoxicity of immunosuppressive drug(s), 34-45
- of cyclosporine, 34-35; *see also* Chronic cyclosporine nephrotoxicity
 - of FK506, 40-41
 - of rapamycin, 41
- Nephrotoxin
- determinants of uptake of, in nephrotoxic ARF and, 3-4
- see also* Toxic nephropathies
- Nervous system, sympathetic, activity of, in HRS, 566-567
- Neurohumoral regulation in cirrhosis, relationship between systemic hemodynamics and, 512-513
- Neuropathy, autonomic, motor, and sensory, in ESRD secondary to DM, management of, 339
- Neutrophils, activation of, as index of HD membrane biocompatibility, 203-204
- NIDDM (non-insulin-dependent diabetes mellitus), *see* Non-insulin-dependent diabetes mellitus nephropathy
- NIH (National Health Institutes), and optimization of dialysis, 290-291
- Nitric oxide (NO)
- in cirrhosis, 510-511
 - production of, in HRS, 567-568
- Nitrosoureas, 57-58
- NO, *see* Nitric oxide
- Nonenzymatic glycation in diabetic nephropathy, 83-85
- Nonheart-beating donor programs to expand donor pool, 378
- Non-insulin-dependent diabetes mellitus (NIDDM; type II diabetes mellitus) nephropathy, 124-147
- demographics of, 132-135
 - GFR in, 125-126
 - natural history of, 137-139
 - prevention of, and intervention in, 142-144
 - with proteinuria, renal histology in, 140-142
 - renal morphology in, 128-130
 - retinopathy and, 139-140
 - risk factors for, 135-137
 - selective glomerular permeability in, 126-129
 - study background, 124-125
- see also* Diabetic nephropathy
- Non-steroidal anti-inflammatory drugs, *see* Prostaglandins in cirrhosis
- Normotensive states, intrarenal ANG II regulation in, 419-420
- Nosocomial transmission
- of HIV infection, 352-354
 - of TB, 358
- see also* Nosocomial transmission of HCV infection
- Nosocomial transmission of HCV infection, 348-350
- modes of, 348-349
 - prevalence of HCV infection as risk factor for, 347
 - strategies to control, 349-350
- NSAIDs (non-steroidal anti-inflammatory drugs), *see* Prostaglandins in cirrhosis
- Nutrition
- and CAPD dose for ESRD, 232-234
- see also* Dietary management of diabetic nephropathy
- Observational studies on glycemic control in IDDM nephropathy, 103-104
- Obstruction, biliary, *see* Biliary obstruction, effects of
- Occupational and environmental renal disease, 46-53
- beryllium-, arsenic-, and chromium-induced, 51
 - cadmium nephropathy as, 48-49
 - due to solvents, 51-52
 - lead nephropathy as, 46-48
 - mercury nephrotoxicity as, 49-50
 - silicon-induced, 50-51
 - uranium-induced, 50
- OKT3, 191, 369
- Older donors, expanding donor pool by using, 373-375
- Older ESRD patients, RRT of, 183-184
- OLT (orthotopic liver transplantation) for HRS, 571-572
- Once-daily dosing of aminoglycoside, effects of, on nephrotoxicity, 29-30
- Oncotically active proteins, transport of, by HD membranes, 200
- OPO (Organ Procurement Office), routine referral of potential donors to, 378
- Optimal dialysis dose for ESRD, 285-297
- current controversies on, 293-294
 - dialysis concepts and state of the art prior to 1972, 286-287
 - mortality rates in U.S. and, 289-290
 - NCDS and, 287-289
 - NIH and, 290-291
 - past and present concepts of uremia and, 285-286
 - pitfalls of quantification of, 292-293

- urea clearance measurement, Kt/V and, 291-292
- Organ failure, *see* Acute renal failure; Angiotensin-converting enzyme inhibitors, renal failure related to; End-stage renal disease; Fibrosis, as pathway to organ failure
- Organ Procurement Office (OPO), routine referral of potential donors to, 378
- Organization of future dialysis facility, 303-304
- Orthotopic liver transplantation (OLT) for HRS, 571-572
- Osteodystrophy, *see* Renal osteodystrophy
- Outcome, *see* Outcome of ARF; Outcome of ESRD; Renal graft outcome and specific conditions
- Outcome of ARF
- with CRRT, 315-316
 - HD membrane effects on, 207
- Outcome of ESRD
- HD membranes and, 207-208
 - RRT and, 176-177
 - see also* Mortality, ESRD; Patient survival, ESRD
- Oxidative stress
- defined, 554
 - in diabetic nephropathy, 85-86
 - and nephrotoxic ARF, 5-7
 - see also* Oxidative stress, bile acids and
- Oxidative stress, bile acids and, 554-558
- association between, 555-556
 - biliary obstruction and, 557-558; *see also* Biliary obstruction, effects of
 - cholestasis and, 556
- PAI-1 (plasminogen activator inhibitor-1), link between ANG II and, in renal fibrosis, 459-460
- Pancreas transplantation, *see* Kidney-pancreas transplantation for ESRD
- Pathogenesis and pathophysiology
- of ACE-related renal failure, 70-71
 - of chronic cyclosporine nephrotoxicity, 38-40
 - of CM-AN, 15-16
 - of comorbid conditions with ESRD secondary to DM and, role of AGEs in, 340-342
 - of diabetic nephropathy, RAS in, 441-442
 - of HRS, 564-565
 - of nephrotoxic ARF, *see* Acute renal failure, nephrotoxic of secondary HPTH in predialysis CRF patients, 275
- Patient goals, assessment and identification of ESRD, in rehabilitation program, 247-248, 250-251
- Patient-to-patient transmission of HIV infection in dialysis unit, 352-353
- Patient preparation for RRT of ESRD, 177-180
- Patient selection for RRT of ESRD, 178-179
- Patient-to-staff transmission of HIV infection in dialysis unit, 353
- Patient survival, ESRD
- HIV-infected, 352
 - see also* Patient survival, ESRD, with RRT
- Patient survival, ESRD, with RRT, 176-177
- with CRRT and IHD, compared, 315
- Payment for ESRD care, *see* Reimbursement, Medicare
- PCRn (protein catabolic rate), importance of, in NCDS, 288-289
- Peptide
- calcitonin-gene related, in cirrhosis, 510
 - see also* Atrial natriuretic peptides
- Peripheral vascular disease in ESRD secondary to DM, management of, 338-339
- Peritoneal dialysis (PD) for ESRD, 181-183
- access for, 180
 - continuous ambulatory, *see* Continuous ambulatory peritoneal dialysis for ESRD
 - continuous cycling, 176, 179, 183
 - with HCV infection, 347
 - with HIV infection, disposal of PD effluent as postexposure prophylaxis, 354
- Peritoneal dialysis (PD) for ESRD secondary to DM, 333-336
- importance of Kt/V in, 335-336
- Permanent vascular access for HD with catheters, 242-243
- Permeability
- of HD membranes, 202
 - selective glomerular, in NIDDM nephropathy, 126-129
- PG(s), *see* Prostaglandins
- PGI₂ (prostacyclin), systemic production and metabolism of, in cirrhosis, 543-544
- Pharmacology
- of aminoglycosides, 27-28
 - pharmacological blockade of RAS during renal development, 495-496
 - pharmacological effects of ANP infusion in cirrhosis, 521
 - pharmacological evidence for role of RAAS in progression of renal disease, 431-432
 - see also* specific drugs
- Phenotypes, 396-401
- ANG II receptor, 397-401
 - angiotensinogen, 396-397
- Phospholipid homeostasis, disturbances of, in nephrotoxic ARF, 8-10
- Physical proximity to HCV-infected dialysis patients, as risk factor for transmission, 348
- Physical rehabilitation of ESRD patient, 248-249
- Physician supply in future dialysis facility, 302, 303
- Physiology
- of PGs and, 530-534
 - renal, bile acid effects on, 551-552
 - see also* Physiology of AT_{1A} angiotensin II receptor, gene targeting approach to
- Physiology of AT_{1A} angiotensin II (ANG II) receptor, gene targeting approach to, 404-411
- and deficiency in AT_{1A} receptor, *see* Deficiency in AT_{1A} angiotensin II receptor, effects of
 - functions and role of ANG II receptors, 404-405
- PKC (protein kinase C) in diabetic nephropathy, 82-83
- Plasma atrial natriuretic peptides (ANPs), renal effects of, 521-522
- Plasma bile acids in liver disease, 550-551
- Plasma exchange, therapeutic, in hepatic failure, blood purification with, 580-581
- Plasminogen activator inhibitor-1 (PAI-1), link between ANG II and, in renal fibrosis, 459-460
- Plicamycin, 58
- Political events in history of ESRD care quality improvement, 218, 219
- Polymorphism, insertion/deletion, of ACE gene, as risk factor for NIDDM nephropathy, 137

- Polyol pathway, and hyperglycemia in diabetic nephropathy, 81-82
- Porto-systemic shunt, transjugular intrahepatic, for HRS, 572
- Postexposure prophylaxis of HIV infection, 354-355
- Potentially unattributed causes of ESRD, 171-172
- Predialysis chronic renal failure (CRF) patients, 270-284
- anemia in, *see* Anemia in predialysis CRF patients
 - metabolic acidosis in, 277-280
 - renal bone disease in, 274-277
- Pre-Medicare era
- CAPD for ESRD in, 227
 - ESRD regulations and legislation in, 160-161
- Presumed consent for organ donation, need for legislation on, 378
- Prevalence
- of dialyzer reuse, 321-322
 - see also* Prevalence of infection(s) in dialyzed ESRD patients
- Prevalence of infection(s) in dialyzed ESRD patients
- HCV, 346-347
 - HIV, 351-352
 - TB, 355
- Prevention
- of ACE-related renal failure, 74-75
 - of CM-AN, 21-22
 - of ESRD, optimization of, 388-389
 - with experimental aminoglycoside nephroprotection, 29
 - of NIDDM nephropathy, 142-144
 - see also* Prophylaxis
- Prograft®, *see* FK506
- Progression of renal disease
- rHuEPO effects on, in predialysis CRF patients, 273
 - see also* Renin-angiotensin-aldosterone system, role of, in renal disease progression
- Progressive renal insufficiency in IDDM nephropathy, anti-hypertensive therapy effects on, 115
- Prophylaxis
- postexposure, of HIV infection, 354-355
 - of TB infection, 357-358
 - see also* Prevention
- Prostacyclin (PGI₂), systemic production and metabolism of, in cirrhosis, 543-544
- Prostaglandins (PGs)
- biochemical and physiological aspects of, 530-534
 - in HRS, 541-542
 - renal, 566
 - see also* Prostaglandins in cirrhosis
- Prostaglandins (PGs) in cirrhosis, 530-548
- administration of, 544-545
 - altered systemic production and metabolism of PGI₂, 543-544
 - biochemical and physiological aspects of PGs and, 530-534
 - diuretics and, 540
 - and hepatorenal syndrome, 541-542
 - Na handling and, *see* Sodium transport, PG effects on renal function and, 536-539
 - water transport and, *see* Water transport, PG effects on
- Protein(s)
- adsorption of, by HD membranes, 200-202
 - alterations in synthesis of, in nephrotoxic ARF, 11
 - metabolism of, effects of metabolic acidosis in predialysis CRF patients on, 278-279
 - oncologically active, HD membrane transport of, 200
 - restriction of dietary, in IDDM nephropathy management, 118
 - see also* Protein catabolic rate; Proteinuria
- Protein catabolic rate (PCRn), importance of, in NCDS, 288-289
- Protein kinase C (PKC) in diabetic nephropathy, 82-83
- Proteinuria
- NIDDM nephropathy with, histology and, 140-142
 - see also* Albumin excretion
- Proximal tubule
- cadmium nephropathy and dysfunction of, 48-49
 - see also* Proximal tubule transport, ANG II regulation of
- Proximal tubule transport, ANG II regulation of, 423-430
- ANG II receptors and, 425-426
 - axial heterogeneity of ANG II regulation, 426
 - intrarenal ANG II, 427-429
 - systemic ANG II, 423-425
 - tubuloglomerular feedback mechanism and, 426-427
- PRs (pyrogen reactions) to reused dialyzers, 326-327
- Psychological rehabilitation of ESRD patient, 249-250
- Public education on organ donation, need for, 376-377
- Pyrogen reactions (PRs) to reused dialyzers, 326-327
- Quality assurance (QA) in ESRD care, 219-220
- Quality improvement (QI) in ESRD care
- in future dialysis facility, 301-302
 - see also* Quality improvement in ESRD care, Medicare Program and
- Quality improvement (QI) in ESRD care, Medicare Program and, 218-225
- continuous, *see* Continuous quality improvement in ESRD care
 - future of, 223-224
 - HCQIP and, 220-221
 - quality assurance and, 219-220
 - reimbursement and, 218-219
- Quality of life (QOL) with RRT of ESRD, 177
- Quantification of optimal dialysis doses for ESRD, pitfalls of, 292-293
- RAAS, *see* Renin-angiotensin-aldosterone system, role of, in renal disease progression
- Rapamycin (sirolimus), 41, 190, 368-369
- RAS, *see* Renin-angiotensin system
- Rationalization, optimization and, of ESRD management, 389-390
- RBF (renal blood flow), PG effects on, 533
- Reactive fibrosis, described, 468
- Recombinant human erythropoietin (rHuEPO) for anemia of ESRD
- cardiovascular effects of, 258-259, 261
 - Medicare reimbursement for, 166-167
 - see also* Recombinant human erythropoietin for predialysis anemia in CRF
- Recombinant human erythropoietin (rHuEPO) for predialysis anemia in CRF, 271-274
- benefits of, 273-274
 - concerns about, 271-272

- safety of, 272-273
- Redox regulation of cytokine gene expression, biliary obstruction, oxidative stress and, 557
- Reduction of Medicare payments, regulations and, 164-166
- Referral
 - of ESRD patient for renal transplantation, contraindications to, 180
 - routine potential donor, to Organ procurement Office, 378
- Regenerated cellulosic hemodialysis (HD) membranes, 196-197
- Regulatory process in Medicare ESRD Program, *see* Legislative and regulatory process in Medicare ESRD Program
- Rehabilitation of ESRD patient, 246-252
 - cost-effectiveness of, 251
 - defined, 246
 - implementing program of, *see* Implementation of rehabilitation program for ESRD patient
- Reimbursement, Medicare
 - DRGs, Method II and, 166
 - for EPO therapy, 166-167
 - exemption process and, 167
 - Monthly Capitation payment, *see* Monthly Capitation payment in Medicare Program
 - quality improvement and, 218-219
 - regulations to hold or reduce, 164-166
 - for renal transplantation, 167-168
 - secondary payor provision in, 166
- Renal abnormalities, disturbed RAS during renal development and, 497-499
- Renal blood flow (RBF), PG effects on, 533
- Renal development, *see* Renin-angiotensin system during renal development
- Renal disease
 - increase in, and increase in ESRD, 174; *see also* End-stage renal disease
 - see also specific renal diseases*
- Renal failure, *see* Acute renal failure; Angiotensin-converting enzyme inhibitors, renal failure related to; End-stage renal disease; Hepatorenal syndrome and *specific nephropathies*
- Renal fibrosis
 - described, 469
 - see also* Renal fibrosis, ANG II in; Renal fibrosis, tissue repair in
- Renal fibrosis, ANG II in, 455-466
 - ANG II-PAI-1 link in, 459-460
 - role of ANG II in, 457-459
 - TGF- β and, *see* Transforming growth factor- β in renal fibrosis
- Renal fibrosis, tissue repair in, 472-474
 - ACE and ANG II receptors in, 477
 - ACE inhibition and AT₁ ANG II receptor antagonism in, 479-480
 - collagen at site of repair in, 473-474
 - inflammatory cell response and, 469-470
 - myofibroblasts in, 472
 - TGF- β and, 472-473
- Renal function
 - bile acid effects on, 551-554
 - in cirrhosis, 536-541
 - see also* Liver disease, kidney in *specific conditions and aspects of renal function*
- Renal graft outcome
 - factors influencing, 191
 - see also* Renal graft survival
- Renal graft survival
 - according to donor age, 374
 - according to donor-recipient relationship, 376
- Renal handling of aminoglycosides, 27-28
- Renal hemodynamic basis of diabetic nephropathy, 93-100
 - hemodynamic alterations, 93-95
 - hyperfiltration and, 96-98
 - mechanisms of renal injury and, 95-96
- Renal histology in NIDDM nephropathy, proteinuria and, 140-142
- Renal injury in diabetic nephropathy
 - mechanisms of, 95-96
 - RAS-induced, mechanisms of, 444
- Renal insufficiency
 - progressive, blood pressure control effects on, 115
 - as risk factor for CM-AN, 17-19
- Renal membrane function, biliary obstruction effects on, 553-554
- Renal morphology in NIDDM nephropathy, 128-130
- Renal osteodystrophy (bone disease)
 - in ESRD secondary to DM, management of, 339-340
 - in predialysis CRF patients, 274-277
- Renal-pancreas transplantation, *see* Kidney-pancreas transplantation for ESRD
- Renal Physicians Association (RPA), CQI in ESRD care and, 222
- Renal physiology, bile acid effects on, 551-552
- Renal prostaglandins (PGs)
 - in HRS, 566
 - see also* Prostaglandins in cirrhosis
- Renal replacement therapy, *see* Continuous renal replacement therapy; Dialysis; End-stage renal disease, RRT of; Kidney-pancreas transplantation for ESRD; Renal transplantation for ESRD
- Renal transplantation, *see* Kidney-pancreas transplantation for ESRD; Renal transplantation for ESRD
- Renal transplantation for ESRD, 188-193
 - antilymphocyte agents and tolerance induction in, 191, 192
 - diabetic ESRD, 181, 182
 - in elderly patients, 184
 - graft outcome in, 191
 - history of, 188-189
 - with HIV infection, 182
 - immunosuppression in, *see* Immunosuppression in renal transplantation for ESRD
 - with LURDs, 191-192
 - Medicare reimbursement for, 167-168
 - referral for, 180
 - secondary to DM, 334
 - xenotransplantation, 192-193, 379
 - see also* Kidney-pancreas transplantation for ESRD
- Renal tubules, *see* Tubules
- Renin
 - PG effects on release of, 533
 - see also entries beginning with terms:* Renin-angiotensin
- Renin-angiotensin-aldosterone system (RAAS), role of, in renal disease progression, 431-440
 - aldosterone links to disease progression, 435-437

- pharmacological evidence for, 431-432
- renin-angiotensin axis in, 432-435
- Renin-angiotensin system (RAS)
 - activation of, in HRS, 565-566
 - intratubular, in ANG II-induced tubular hypertrophy, 449
 - role of, in progression of renal disease, 432-435
 - see also* Renin-angiotensin system during renal development
- Renin-angiotensin system (RAS) during renal development, 492-501
 - effects of RAS gene targeting on, 496-497
 - expression of, 492-495
 - mechanisms of renal abnormalities and disturbed, 497-499
 - pharmacological blockade of, 495-496
- Reorganization of nephrology, future dialysis facility and, 299-300
- Reparative (replacement) fibrosis, described, 467-468
- Reprocessed dialyzers, *see* Dialyzer reuse
- Residual chemical infusion with reused dialyzers, 325-326
- Resistance to ANPs in cirrhosis, renal effects of, 527
- Retinopathy, diabetic
 - in ESRD secondary to DM, management of, 340
 - and NIDDM nephropathy, 139-140
- Reuse of dialyzers, *see* Dialyzer reuse
- Reversibility
 - of ACE-related renal failure, 71-72
 - of decreased GFR in ESRD, 178
- rHuEPO, *see* entries beginning with terms: Recombinant human erythropoietin
- Risk factors
 - for CM-AN, 17-18
 - for HCV infection in dialyzed ESRD patients, 347-348
 - for NIDDM nephropathy, 135-137
- Routine referral of potential donors to Organ procurement Office, 378
- RPA (Renal Physicians Association), CQI in ESRD care and, 222
- RRT (renal replacement therapy), *see* Continuous renal replacement therapy; Dialysis; End-stage renal disease, RRT of; Kidney-pancreas transplantation for ESRD; Renal transplantation for ESRD
- S 61143 (mycophenolate mofetil), 190-191, 366-367
- Safety of rHuEPO for predialysis anemia in CRF, 272-273
- Secondary hyperparathyroidism (HPTH) in predialysis CRF patients, pathogenesis of, 275
- Secondary payor provision in Medicare Program, 166
- Selective glomerular permeability in NIDDM nephropathy, 126-129
- Sensory neuropathy in ESRD secondary to DM, management of, 339
- Sex, as risk factor for NIDDM nephropathy, 135-136
- Shared dialysis machines by ESRD patients, HCV infection transmission through, 348
- Shunts
 - external, as vascular access for HD of ESRD, 239-240
 - transjugular intrahepatic porto-systemic, for HRS, 572
- Sieving coefficient of HD membranes, 200
- Silicon-induced nephropathy, 50-51
- Sirolimus (rapamycin), 41, 190, 368-369
- Small solutes, enhancing removal of, with HD membranes, 209
- Smooth muscle, PG effects on function of, 533
- Social environment of future dialysis facility, 303
- Social rehabilitation of ESRD patient, 249
- Sodium (Na) transport, PG effects on, 533
 - in cirrhosis, 539-540
- Solutes, enhancing removal of small, with HD membranes, 209
- Solvents, nephrotoxicity of, 51-52
- Staff, *see* Dialysis staff
- Stage 1 of NIDDM development, 137-138, 140
- Stage 2 of NIDDM development, 138, 140
- Stage 3 of NIDDM development, 138, 140
- Stage 4 of NIDDM development, 138-139, 140
- Stage 5 of NIDDM development, 139, 140
- Standard infection control practices in dialysis unit, breakdown in, and HCV virus transmission, 348
- Stress, *see* Oxidative stress
- Structure of HD membranes, 196-198
- Supply of nephrologists in future dialysis facility, 302-303
- Survival, *see* Patient survival, ESRD; Renal graft survival
- Sympathetic nervous system, activity of, in HRS, 566-567
- Synthetic hemodialysis (HD) membranes, 197-198
- Systemic action of ANG II, local versus, 401-403
- Systemic angiotensin II (ANG II), proximal tubule transport regulation and, 423-425
- Systemic hemodynamics
 - biliary obstruction effects on, 554
 - in cirrhosis, *see* Systemic hemodynamics in cirrhosis
 - effects of ANPs on, 521
- Systemic hemodynamics in cirrhosis
 - abnormalities of, 506-508
 - relationship between neurohumoral regulation and, 512-513
- Systemic prostacyclin (PGI₂), production and metabolism of, in cirrhosis, 543-544
- Systemic renin-angiotensin system (RAS) in diabetic nephropathy, 442
- Tacrolimus, *see* FK506
- TB (tuberculosis) in dialyzed ESRD patients, 355-358
- Technical events in history of ESRD care quality improvement, 218, 219
- TGF, *see* Transforming growth factor- β ; Transforming growth factor- β_1
- Therapeutic plasma exchange (TPE) in hepatic failure, blood purification with, 580-581
- Therapy and management
 - of ACE-related renal failure, 74-75
 - ANG II blockade, effects of, on TGF- β in renal fibrosis, 460-462
 - antihypertensive, *see* specific antihypertensive agents
 - dietary, *see* Dietary management of diabetic nephropathy; Nutrition
 - of ESRD, *see* Therapy and management of ESRD
 - of HRS, 571-572, 576
 - immunosuppressive, *see* Immunosuppression in renal transplantation for ESRD; Nephrotoxicity of immunosuppressive drug(s)
 - of lead nephropathy, 48

- nephrotoxicity due to, *see* Acute renal failure, nephrotoxic; Aminoglycoside nephrotoxicity; Angiotensin-converting enzyme inhibitors, renal failure related to; Cancer therapy, renal toxicities of; Contrast media-associated nephropathy; Nephrotoxicity of immunosuppressive drug(s); Occupational and environmental renal disease of NIDDM nephropathy, 142-144
 PG, of cirrhosis, 544-545
 renal replacement, *see* Continuous renal replacement therapy; Dialysis; End-stage renal disease, RRT of; Kidney-pancreas transplantation for ESRD; Renal transplantation for ESRD
see also Glycemic control; Therapy and management of IDDM nephropathy *specific drugs and specific conditions*
- Therapy and management of comorbid conditions in dialyzed ESRD patients
 of HCV infection with IFN α , 350
 of hypertension, 261-263
 of myocardial dysfunction, 265-266
 of TB, 356-357
- Therapy and management of comorbid conditions in ESRD secondary to DM, 336-340
 of AGE accumulation, 342
 of coronary artery disease and peripheral vascular disease, 338-339
 dialysis adequacy and, 336
 of gastroparesis and diabetic enteropathy, 339
 of hyperglycemia, 336-337
 of hypertension, 336
 of lipid abnormalities, 338
 of malnutrition, 337-338
 of motor, sensory, and autonomic neuropathy, 339
 of renal osteodystrophy, 339-340
 of retinopathy and depression, 340
- Therapy and management of comorbid conditions in predialysis CRF patients
 alkali therapy of metabolic acidosis, 280
 EPO for anemia, *see* Recombinant human erythropoietin for predialysis anemia in CRF
 vitamin D₃ metabolite, of renal bone disease, 275-277
- Therapy and management of ESRD
 optimization of, 387-390
 renal replacement, *see* End-stage renal disease, RRT of
see also Therapy and management of comorbid conditions in dialyzed ESRD patients; Therapy and management of comorbid conditions in ESRD secondary to DM; Therapy and management of comorbid conditions in predialysis CRF patients
- Therapy and management of IDDM nephropathy, 114-123
 with aldose reductase inhibitors, 118-119
 with anti-lipidemic agents, 119-120
 with blood pressure control, 114-118
 with dietary protein restriction, 118
 other agents in, 120
see also Glycemic control, relationship between IDDM nephropathy development and
- Thromboxane(s) (TX)
 biochemical and physiological aspects of, 530-534
 in diabetic nephropathy, 86
 in HRS, 541-542
- Thromboxane A₂ (TXA₂), and renal function in cirrhosis, 540-541
- TIPS (transjugular intrahepatic porto-systemic shunt) for HRS, 572
- Tissue repair in fibrosis
 ACE and ANG II receptors in, 474-478
 ACE inhibition and AT₁ receptor antagonism and, 478-479
 collagen at site of, 473-474
 elevated circulating ANG II and, 480-481
 inflammatory cell responses in, 469-471
 myofibroblasts in, 471-472
 other modulators of, 481-482
 paradigm of, 482-483
 TGF- β_1 and, 472-473
- Tolerance to renal transplantation, induction of, 191, 192
- Toxic nephropathies
 introduction to, 1-2
see also Acute renal failure, nephrotoxic; Aminoglycoside nephrotoxicity; Angiotensin-converting enzyme inhibitors, renal failure related to; Cancer therapy, renal toxicities of; Contrast media-associated nephropathy; Nephrotoxicity of immunosuppressive drug(s); Occupational and environmental renal disease
- Toxicity
 chemical, of reused dialyzers, 324-325
see also Nephrotoxicity of immunosuppressive drug(s); Toxic nephropathies
- TPE (therapeutic plasma exchange) in hepatic failure, blood purification with, 580-581
- Transforming growth factor- β (TGF- β)
 and diabetic nephropathy, 86-87
see also Transforming growth factor- β in renal fibrosis
- Transforming growth factor- β (TGF- β) in renal fibrosis
 ANG II blockade effects on, 460-462
 role of, 455-457
 stimuli for elevated, 457
- Transforming growth factor- β_1 (TGF- β_1), and tissue repair in fibrosis, 472-473
- Transfusions, number of received blood, as risk factor for HCV infection, 347
- Transjugular intrahepatic porto-systemic shunt (TIPS) for HRS, 572
- Transmission of infections, *see* Nosocomial transmission
- Transplantation
 bone marrow, nephrotoxicity of, 60-62
 chronic cyclosporine nephrotoxicity in, 35-37
 orthotopic liver, for HRS, 571-572
 pancreas, *see* Kidney-pancreas transplantation for ESRD
see also Renal transplantation for ESRD
- Transport properties of HD membranes, 198-202
- Tuberculosis (TB) in dialyzed ESRD patients, 355-358
- Tubular growth, ANG II influence on, 451-452; *see also* Tubular hypertrophy, ANG II-induced
- Tubular hypertrophy, ANG II-induced, 448-454
 and ANG II influence on tubular growth, 451-452
 and importance of tubular hypertrophy, 448-449
 intratubular RAS and, 449
 mechanisms of, 449-451
- Tubules
 bioartificial, 384-385

- see also* Proximal tubule and entries beginning with
term: Tubular and *element*: Tubulo-
- Tubuloglomerular feedback mechanism, proximal tubule
transport regulation by ANG II and, 426-427
- TXs, *see* Thromboxane(s); Thromboxane A₂
- Type I diabetes mellitus (insulin-dependent diabetes mellitus), *see* Diabetic nephropathy; Glycemic control, relationship between IDDM nephropathy development and; Therapy and management of IDDM nephropathy
- Type II diabetes mellitus, *see* Non-insulin-dependent diabetes mellitus
- Ultrafiltrate, dialysis, HCV infection transmission through, 348-349
- Ultrafiltration coefficient of HD membranes, 198
- Unattributed causes of ESRD, 171-172
- Unrelated donors, *see* Living-unrelated donors
- Uranium-induced nephropathy, 50
- Urea
kinetics of, as measure of CAPD dose adequacy, 229-232; *see also* Kt/V
transport of, by HD membranes, 198-199
- Uremia, *see* End-stage renal disease
- Uremic acidosis in ESRD, *see* Metabolic acidosis in ESRD
- Urinary bile acids in liver disease, 550-551
- Urinary excretion, albumin, *see* Albumin excretion
- Vascular access for RRT of ESRD, 179-180
problems of, in ESRD secondary to DM, 339
see also Hemodialysis, vascular access for
- Vascular disease, peripheral, in ESRD secondary to DM, amputation and, 339
- Vasoactive substances, abnormalities of, in cirrhosis, 509-512
in ANPs and CGRP, 510; *see also* Atrial natriuretic peptides in cirrhosis
in ETs, 511-512
in NO and catecholamines, 510-511
- Vasodilators, direct, for hypertensive dialyzed ESRD patients, 262, 263
- Ventricular hypertrophy, left, and myocardial dysfunction in ESRD, 263-264
- Vitamin D₃ metabolites for renal bone disease in predialysis CRF patients, 275-277
- Volume overload, chronic, and myocardial dysfunction in ESRD, 264
- Water immersion in study of renal effects of ANPs in cirrhosis, 525-527
- Water transport, PG effects on, 534
in cirrhosis, 539-540
- Xenotransplantation, 192-193, 379